CLAIMS

1. A system for a vehicle such as an aircraft comprising a plurality of networked communication devices arranged to communicate wirelessly with a master controller using spread spectrum communication to control operation of the devices and/or to provide information relating to the status of the devices.

2. A system according to claim 1 wherein the master controller is capable of transmitting and receiving signals to and from each device independently of the other devices.

3. A system according to claim 1 wherein the devices are arranged so that signals to and from the master controller are cascaded between the devices.

4. A system according to claim 3 wherein the devices are arranged in groups with at least one device in each group acting as a hub to receive/transmit signals to and from the other devices in the group and the hub(s) of adjacent group(s) and/or the master controller.

5. A system according to claim 4 wherein signals are cascaded in both directions in a sequential manner to and from the master controller via the hubs to all the devices.

6. A system according to claim 3 wherein all the devices are arranged to receive/transmit any signal.

7. A system according to claim 6 wherein signals are cascaded in both directions in a random manner to and from the master controller and all the devices.

8. A system according to any one of the preceding claims wherein each device is provided with its own power source, for example a battery.

9. A system according to claim 8 wherein the battery is replaceable, for example a lithium battery.

10. A system according to claim 8 wherein the battery is rechargeable.

11. A system according to claim 10 wherein each device is provided with a re-chargeable battery and a photovoltaic cell to charge the battery.

12. A system according to claim 12 wherein each device includes a charging circuit to control operation of the photovoltaic cell to charge the battery if the charged level of the battery drops below a pre-determined limit.

13. A system according to any one of claims 8 to 13 wherein each device provides a visual and/or audible warning of failure of the battery and/or the photovoltaic cell.

14. A system according to any one of the preceding claims wherein each device is arranged to cycle between an operable (awake) condition in which it can receive/transmit a signal and an inoperable (sleep) condition in which it does not receive/transmit a signal.

15. A system according to claim 14 wherein the cycle time is of the order of a few seconds.

16. A system according to claim 14 or claim 15 wherein the devices cycle between the operable and inoperable conditions in a random manner.

17. A system according to any one of claims 14 to 16 wherein each device can be switched between two cycle modes with different intervals between the operable and inoperable conditions.

18. A system according to claim 17 wherein stand-by and armed modes of operation are provided with the stand-by mode having a longer cycle time than the armed mode, for example, a cycle time of 2.5 seconds in the armed mode and a cycle time of 10 seconds in the stand-by mode.

19. A system according to any one of claims 14 to 18 wherein each device has a listening time in the awake condition a few milliseconds, for example 2-3 milliseconds, typically 2.5 milliseconds

20. A system according to any one of the preceding claims wherein each device is provided with a unique identification code and the master controller can transmit a polling signal that requires each device to transmit its unique identification code.

21. A system according to claim 20 wherein the identification codes are generated by an initialisation signal during initial set-up of the system.

22. A system according to any one of the preceding claims wherein each device is operable in response to a test signal from the master controller to transmit a signal to indicate if the device is operational.

23. A system according to any one of the preceding claims wherein the master controller is operable to emit a signal centred on a single frequency.

24. A system according to any one of the preceding claims wherein the networked devices comprise light units of an emergency lighting system to guide passengers to and to identify exits in an emergency.

25. A system according to claim 24 wherein each light unit comprises a light source, for example a light emitting diode (LED), preferably an array of LEDs, and more preferably white LEDs.

26. A system according to claim 24 or claim 25 wherein the emergency lighting system is provided in an aircraft to guide passengers to an exit in an emergency.

27. A system according to claim 26 wherein the devices comprise one or more of exit identifiers, direction indicators, escape path markers or overhead lighting.

28. A system according to claim 27 wherein the exit identifiers comprise signs placed at the exits to identify where the exits are.

29. A system according to claim 27 wherein the direction indicators comprise arrows arranged to indicate the direction to the exits.

30. A system according to claim 27 wherein the escape path markers are positioned at or near floor level along one or both sides of an aisle along which passengers can move to an exit.

31. A system according to any one of the preceding claims wherein at least two master controllers are provided for communicating with the networked devices using spread spectrum communication.

32. A system according to claim 31 wherein each master controller is operable automatically in response to activation of any master controller.

33. A system according to claim 31 wherein one of the master controllers is a primary controller and each additional master controller is a secondary controller operable automatically in response to activation of the primary controller,

34. A system according to any one of the preceding claims wherein each master controller is manually operable.

35. A method of operating an emergency lighting system comprising providing a transmitter operable to emit a spread spectrum signal and a receiver responsive to the spread spectrum signal for controlling operation of lighting means.

36. A method according to claim 35 wherein the lighting means comprises a plurality of light units each capable of receiving and transmitting a spread spectrum signal and the method further comprises cascading the broadcast spread spectrum signal from the transmitter between light units of the lighting means.